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A New Association Of Post-T Tauri Stars Near The Sun 1

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abstract

Observing ROSAT sources in an area 20×25 centered at the high latitude ($b = -59$) active star []ER $Eri, we found evidences for a nearby association, that we call the Horologium Association (HorA), formed by at least 10 very T Tauri stars. We suggest other six stars as possible members of this proposed association. We examine several requirements that$

The space velocity components, of the HorA relative to the Sun (U= -9.5 ± 1.0, V = -20.9 ± 1.1, W = -2.1 ± 1.9) are not far from those of the Local Association, so that it could be one of its last episodes of star formation. In this region of the sky there are some hotter and non-X-ray active stars, with similar space velocities, that could be the massive members of the HorA, among them, the nearby Be star []Achernar. The maximum of the mass distribution function of its probable members is around $0.7 - 0.9\ M$. We estimate its distance as $\sim 60\ pc$ and its size as $\sim 50\ pc$. If spherical, this size would be larger than the surveyed area and many other members could have bee

We also observed 3 control regions, two at northern and southern galactic latitudes and a third one in the known []TW $Hya Association (TW A)$, and the properties and distribution of their young stars strengthen the reality of the HorA.

[]ER $Eri itself was found to be a RS CVn - like system.$